

MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

OCTOBER, 1890.

CONTENTS.

	Page.		Page.
INTRODUCTION.....	251	WINDS.....	263
Data used in preparing Review.		Prevailing directions; High velocities; Local storms; Water-	
CHARACTERISTICS OF THE WEATHER FOR OCT., 1890...	251	spouts; Storms at Palmetto, Nev., August 7 and 11, 1890.	
ATMOSPHERIC PRESSURE.....	252	ATMOSPHERIC ELECTRICITY.....	264
Comparison of means of 8 a. m. and 8 p. m. observations with		Auroras; Thunder-storms.	
means of hourly observations; General distribution; Com-		INLAND NAVIGATION.....	265
parison of means with those of previous month; Departure		Stage of water in rivers and harbors; Floods.	
from normal; Monthly ranges; Areas of high pressure;		MISCELLANEOUS PHENOMENA.....	265
Areas of low pressure.		Sun spots; Drought; Prairie and forest fires.	
NORTH ATLANTIC STORMS.....	255	VERIFICATIONS.....	266
North Atlantic storms for October, 1890; Fog; Ocean ice.		Forecasts for 24 hours; Forecasts for 48 hours; Cautionary sig-	
TEMPERATURE OF THE AIR.....	256	nals; Local verifications.	
General remarks; Warmest and coolest Octobers on record;		STATE WEATHER SERVICES.....	266
Deviations from normal temperature; Maximum and minimum		Extracts and summaries from reports of the several services.	
temperature; Limits of freezing weather; Monthly and daily		METEOROLOGICAL TABLES.....	268
ranges; Frost; Temperature of water.		Data from voluntary observers; Late reports for September,	
PRECIPITATION.....	258	1890; Data from stations of the Signal Service.	
General remarks; Years of greatest and least precipitation for		CHARTS—I. Tracks of areas of low pressure; II. Isobars, isotherms,	
October; Deviations from average precipitation; Maximum		and winds, and limits of freezing weather; III. Precipitation.	
rainfall in one hour, or less; Excessive precipitation; Snow;			
Depth of snow on ground at close of month; Hail; Sleet.			

PREPARED UNDER THE DIRECTION OF
BRIGADIER GENERAL A. W. GREELY,
CHIEF SIGNAL OFFICER OF THE ARMY.

BY H. H. C. DUNWOODY,
CAPTAIN, 4TH ARTILLERY, SIGNAL OFFICER.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF WAR.

WASHINGTON CITY:
SIGNAL OFFICE.
1890.